CERTIFICATE OF FASCIMILE TRANSMISSION
TO THE UNITED STATES PATENT AND TRADEMARK OFFICE

571-273-8300

I hereby certify that this correspondence is being facsimile transmitted to the U.S. Patent and Trademark Office at the telephone number set forth above on February 14, 2006.

By Natali A Mango
(Signature)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	:	MANGOLD, Stefan Y.
Serial No.	:	10/023,120
Filed	:	December 17, 2001
Atty. Docket	:	US010334
Group Art Unit	:	2666
Examiner	:	Michael J. Moore, Jr.
Conf. No.	:	2420

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT

Sir:

In response to the Office Action mailed October 14, 2005, please amend the application as follows:

Amendments to the Claims

These claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A method for sharing the bandwidth over a wireless channel between a plurality of first stations and a plurality of second stations in a wireless local area network (WLAN) having an access point (AP), the method comprising ~~the steps of~~:

periodically transmitting, by said AP, a control frame comprising data indicative of a predetermined time interval during which each of said first stations can occupy the wireless channel for the data transmissions onto said wireless channel;

determining, by said AP, whether said predetermined time interval specified in said control frame is longer than an interval of time following receipt of a last frame from one of said first stations and before a scheduled start of a set of next frames from at least one of said second stations;

if so, waiting, by said AP, for a point interframe spacing interval (PIFS) after which said next frames from said second stations are permitted to transmit to said AP over said wireless channel; and,

inhibiting transmission from said plurality of first stations to said AP.

2. (currently amended) The method of claim 1, further comprising ~~the step of~~ permitting said plurality of second stations to transmit a data packet to said AP over said wireless channel, said data packet including a shorter duration than said predetermined time period specified in said control ~~signal~~ frame.

3. (currently amended) The method of claim 1, wherein, if said predetermined time interval specified in said control frame is less than said interval of time before the scheduled start of said next frame, transmitting, by said AP, a data packet to said plurality of first and second stations over said wireless channel, said data packet including a shorter duration than said predetermined time period specified in said control ~~signal~~ frame.

4. (currently amended) The method of claim 1, wherein, if said predetermined time interval specified in said control frame is less than said interval of time before the scheduled start of said next frame, permitting said plurality of first stations to transmit a data packet to said AP over said wireless channel, said data packet including a shorter duration than said predetermined time period specified in said control ~~signal~~ frame.

5. (currently amended) The method of claim 1, further comprising ~~the steps of~~:

determining whether said wireless channel between said AP and said plurality of first and second stations is available;

if so, inhibiting transmission from the plurality of said first stations to said AP;

transmitting, from said AP to said plurality of first stations, a high priority signal indicative of a duration that said plurality of second stations is allowed to occupy said wireless channel; and~~,~~

permitting said plurality of second stations to transmit a data packet to said AP over said wireless channel, said data packet including a shorter duration than said predetermined time period specified in said control ~~signal~~ frame.

6. (original) The method of claim 1, wherein said plurality of first stations includes 802.11

compliant systems.

7. (original) The method of claim 1, wherein said plurality of second stations includes HIPERLAN/2 compliant systems.

8. (original) The method of claim 1, wherein said plurality of first stations can transmit data frames without permission from said AP and said plurality of second stations can transmit data frames when permitted by said AP.

9. (currently amended) A method for sharing the bandwidth over a wireless channel between a plurality of first stations and a plurality of second stations in a wireless local area network (WLAN) having an access point (AP), the method comprising the steps of:

transmitting a control frame having a contention free period (CFP) mode and a contention period (CP) mode, said control frame including data indicative of a predetermined time interval that each of said first stations has to complete data transmission onto said wireless channel;

determining whether said wireless channel between said AP and said plurality of first and second stations is available;

if said wireless channel is available during said CP mode, polling at said AP to inhibit transmission of said plurality of first stations over said wireless channel; ~~and,~~

determining, by said AP, whether said predetermined time interval specified in said control frame is longer than an interval of time following receipt of a last frame from one of said first stations and before a scheduled start of a set of next frames from at least one of said second stations;

if so, determining a range of time $[t_1, t_2]$ to control said wireless channel by said AP; and

~~permitting said plurality of second stations to transmit a data packet to said AP over said wireless channel~~ controlling said wireless channel within said time range to permit said plurality of second stations to transmit a data packet, said data packet including a shorter duration than said predetermined time ~~period~~ interval specified in said control ~~signal~~ frame.

10. (canceled)

11. (currently amended) The method of claim ~~10~~ 9, wherein said range of time is determined according to the following equation.

$[t_1, t_2] =$ *[-1* (TXOP_Limit + QoS CF-Poll frame duration + SIFS),*

-1 QoS CF-Poll frame duration + SIFS),*

wherein *TXOP_Limit* represents said predetermined time period that said plurality of first stations can transmit data frames after said wireless channel is determined to be available, *QoS CF-Poll frame duration* represents the duration of a QoS CF-Poll frame used to instruct said AP to inhibit transmission from said plurality of first stations, and *SIFS* represents the duration of a Short Interframe Space interval.

12. (currently amended) The method of claim ~~10~~ 9, wherein, if said wireless channel is unavailable, permitting said plurality of second stations to transmit a data packet to said AP over said wireless channel immediately when said wireless channel becomes available.

13. (currently amended) The method of claim ~~10~~ 9, wherein, if said predetermined time interval specified in said control frame is less than said interval of time before the scheduled start of said next frame, transmitting, by said AP, a data packet to said plurality of first and second

stations over said wireless channel, said data packet including a shorter duration than said predetermined time period specified in said control signal.

14. (currently amended) The method of claim ~~10~~ 9, wherein, if said predetermined time interval specified in said control frame is less than said interval of time before the scheduled start of said next frame, permitting said plurality of first stations to transmit a data packet to said AP over said wireless channel, said data packet including a shorter duration than said predetermined time period specified in said control ~~signal~~ frame.

15. (currently amended) The method of claim 9, wherein, if said wireless channel is available during said CFP mode, the method further comprises ~~the steps of~~:

transmitting, from said AP to said plurality of first and second stations, a high priority signal indicative of a duration that said plurality of first and second stations is allowed to occupy said wireless channel; and,

permitting said plurality of second stations to transmit a data packet to said AP over said wireless channel, said data packet including a shorter duration than said predetermined time period specified in said control ~~signal~~ frame.

16. (original) The method of claim 9, wherein said plurality of first stations includes 802.11 compliant systems.

17. (original) The method of claim 9, wherein said plurality of first stations can transmit data frames without permission from said AP and said plurality of second stations can transmit data frames when permitted by said AP.

18. (currently amended) The method of claim ~~10~~ 9, wherein said plurality of second stations includes HIPERLAN/2 compliant systems.

19. (currently amended) A system local area network station for receiving and transmitting data over a wireless channel between a plurality of first stations and a plurality of second stations in a wireless local area network (WLAN) having an access point (AP), comprising:

a receiver means for receiving data on said wireless channel;

a CCHC circuit configured to allocate a predetermined time interval for each of said first and second stations to initiate data transmission onto said wireless channel, said CCHC circuit being further configured to transmit a data packet to said plurality of first and second stations over said wireless channel if said predetermined time interval is less than the time left before a scheduled start of a next frame by said plurality of second stations; and;

a signal processing circuit coupled to said CCHC to transmit and receive signals to and from said plurality of first and second stations, said signal processing circuit ~~processes~~ processing the received signals ~~received therein~~ to permit said plurality of second stations to transmit a data packet to said AP over said wireless channel, said data packet including a shorter duration than said predetermined time ~~period specified in said control signal~~ interval.

20. (original) The system of claim 19, further comprising a transmitter means for transmitting data on said wireless channel.

21. (currently amended) The system of claim 19, wherein said CCHC further operates to inhibit transmission from said plurality of first ~~and said second~~ stations when permitting said plurality of second stations to transmit a data packet.

22. (original) The system of claim 19, wherein said CCHC further operates to control said wireless channel within a specified range of time $[t_1, t_2]$ to permit said plurality of second stations to transmit a data packet.

23. (original) The system of claim 22, wherein said time range $[t_1, t_2]$ is determined according to the following equation:

$[t_1, t_2] =$ *[-1* (TXOP_Limit + QoS CF-Poll frame duration + SIFS),*

-1 QoS CF-Poll frame duration + SIFS),*

wherein *TXOP_Limit* represents said predetermined time period that said plurality of first stations can transmit data frames after said wireless channel is determined to be available, *QoS CF-Poll frame duration* represents the duration of a QoS CF-Poll frame used to instruct said AP to inhibit transmission from said plurality of first stations, and *SIFS* represents the duration of a Short Interframe Space interval.

24. (canceled)

25. (currently amended) The system of claim 19, wherein said CCHC further operates to permit transmission of said plurality of first and second stations to transmit a data packet having a shorter duration than said predetermined time interval over said wireless channel if said predetermined time interval is less than the time left before a scheduled start of a next frame by said plurality of second stations.

26. (original) The system of claim 19, wherein said plurality of first stations includes 802.11 compliant systems.

27. (original) The method of claim 19, wherein said plurality of second stations includes HIPERLAN/2 compliant systems.

Amendments to the Drawings

The attached sheet of drawings includes changes to Fig. 8. This sheet replaces the original sheet including Fig. 8.

Attachment: Replacement Sheet

REMARKS/ARGUMENTS

Thorough examination of the application is sincerely appreciated. Applicant thanks the Examiner for the detailed action and helpful remarks to advance the prosecution of the application.

In response to the objection to the drawings, enclosed is a replacement sheet with the notation "YES" and "NO" added to the arrows leading from decision block 120, as suggested in the Office Action. Entry of the replacement sheet and withdrawal of the objection are earnestly solicited.

In response to the claim objections, it is respectfully submitted that Applicant's claims have been amended accordingly to correct the minor informalities as noted in the Office Action. Withdrawal of the objection is respectfully requested.

According to the Office Action, claim 19 is rejected under 35 USC 112, second paragraph. In response, claim 19 has been amended to overcome the lack of antecedent basis rejection. Withdrawal of the rejection is, therefore, respectfully requested.

Further according to the Office Action, claims 9 and 15 – 17 are rejected under 35 USC 102(e) as being anticipated by U.S. Published Application US 2004/0141522 (Texerman). Further according to the Office Action, claims 19 – 22, 26 and 27 are rejected under 35 USC 103 as being unpatentable over Texerman. Still further according to the Office Action, claims 1 – 8 are allowable over the prior art, and claims 10 – 14, 18 and 23 – 25 contain allowable subject matter.

To conclude the prosecution of the application in order to expedite issuance of the patent and without conceding any statements or waiving any arguments in the Office Action, Applicant amends independent claims 9 and 19 to include the allowable subject matter. The application is

now believed to be in condition for allowance, and an early notice thereof is respectfully requested.

An earnest effort has been made to be fully responsive to the Examiner's correspondence and advance the prosecution of this case. If there are any questions, the Examiner is respectfully requested to call the undersigned attorney at the number listed below.

Please charge any additional fees associated with this application to Deposit Account No. 14-1270.

Respectfully submitted,

By _____

Larry Liberchuk, Reg. No. 40,352
Senior IP Counsel
Philips Electronics N.A. Corporation
914-333-9602

REPLACEMENT SHEET

7/7

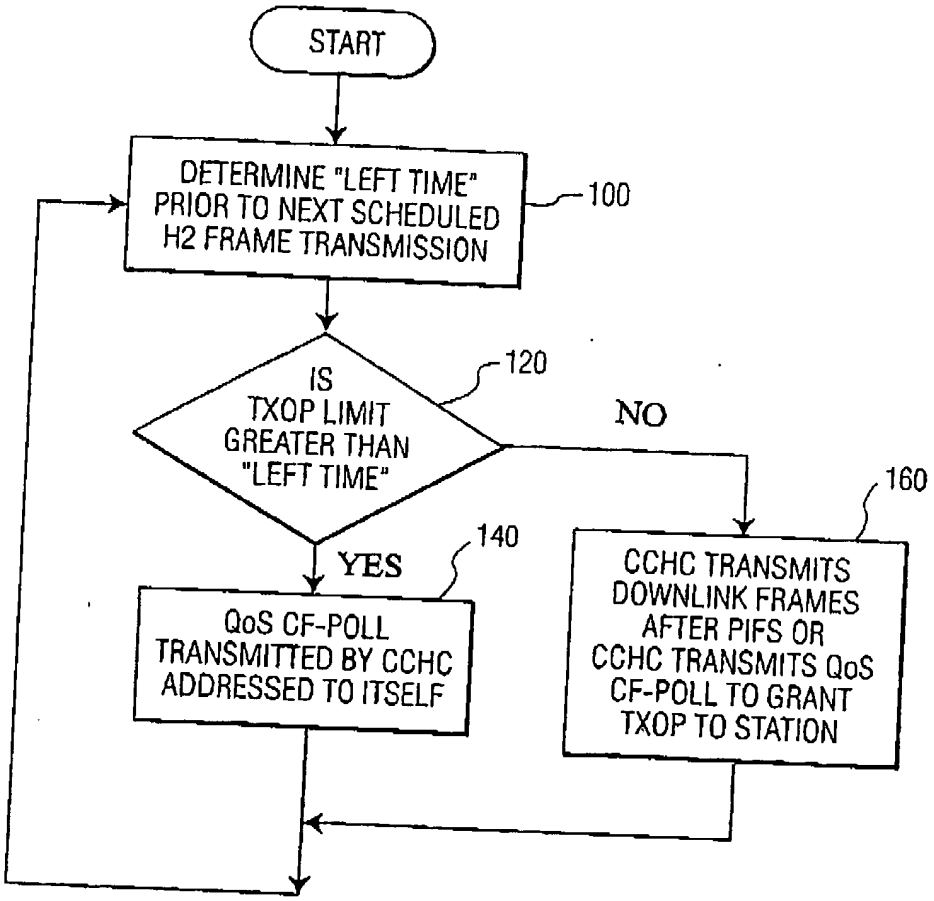

FIG. 8